



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/500,254	02/08/2000	Hans Jurgen Mattausch	4853-000001	2313

826 7590 08/04/2003

ALSTON & BIRD LLP
BANK OF AMERICA PLAZA
101 SOUTH TRYON STREET, SUITE 4000
CHARLOTTE, NC 28280-4000

EXAMINER

PORTKA, GARY J

ART UNIT PAPER NUMBER

2188

DATE MAILED: 08/04/2003

23

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/500,254

Applicant(s)

MATTAUSCH, HANS JURGEN

Examiner

Gary J Portka

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claim 6 has been canceled by Applicant. Claims 1-5 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 3/1 are rejected under 35 U.S.C. 102(b) as anticipated by Heugel et al., U.S. Patent 5,495,570, or, in the alternative, under 35 U.S.C. 103(a) as obvious over Heugel et al., U.S. Patent 5,495,570, in view of Robinson et al., U.S. Patent 5,590,349.

5. As to claim 1, Heugel discloses the recited shared memory comprising: plurality of multiport memories (20, plus all interfaces, Figure 2) accessible from a copybus side (at 26A, 26B) and a user side (23), at least one copybus (28A, 28B), the shared memory adapted to copy contents of one of the memories which has been changed by

writing from the user side, to other memories through the copybus (see Abstract, Figures 1 and 2, column 4 lines 5-35, column 5 lines 12-40, and column 7 lines 17-25). Heugel may be seen as teaching that the multiple port memories provide internally concurrent access, since the recited memory may be considered to include the interfaces shown in Figure 2 (i.e., all items in Fig. 2 except for the MPU 24), and since the copying via DMA by an out-of-service processor may access the memory while the in-service processor continues normal operation (col. 7).

However, assuming that only item 20 is considered the recited memory, Heugel does not teach that the multiple port memories provide internally concurrent access. However, the advantages of multiple port memory having internally concurrent access were well known, and taught by Robinson at column 8 lines 17-31, and Fig. 2. Robinson teaches a true multiport memory implementation that provides internally concurrent random accesses for each port, removes initial access time penalty, and is an inherently simple design because multiplexors are not required. From these teachings, an artisan would have recognized that these advantages could be achieved in the multiport memory of Heugel by implementing it in this way, and thus would have been motivated to do so. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use in Heugel a multiport memory providing internally concurrent access, because as taught by Robinson such a true multiport memory provides internally concurrent random accesses, removes initial access time penalty, and avoids the requirement to add multiplexors.

7. As to claim 3/1, Heugel discloses the memories are formed by an integrated circuit technique (since RAM 20 is considered as formed by an integrated circuit technique).

8. Claims 2, 3/2, and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heugel in view of Robinson, and further in view of Hirose, JP Patent 61-3450 (A) (hereinafter "Hirose").

9. As to claims 2, 3/2, and 5, neither Heugel nor Robinson disclose copying optically. However, the technique was well known in the art and was taught by Hirose. The device of Hirose is taught to improve signal transmission speed in a shared memory, and clearly invokes the trend of reducing cost and improving performance by increasing integration as compared to the other references. The device is formed by a three dimensional integrated circuit technique. Thus it would have been obvious to one of ordinary skill in the art to copy optically with a three dimensional integrated circuit device, because such a device and method was previously taught by Hirose as improving performance.

10. As to claim 4, while Hirose teaches a three dimensional integrated device, an artisan would have known that older two dimensional devices were still applicable, and would have desired such a device for the purposes of reducing cost, or for compatibility with existing manufacturing facilities and/or interfacing circuits. Thus it would have been obvious to use a two dimensional integrated circuit technique, because this is well known as a cheaper manufacturing alternative, and may improve compatibility requirements.

Response to Arguments

11. Applicant's arguments filed May 27, 2003 have been fully considered but they are not persuasive.

Applicants argue that in Heugel the busses do not act as copy busses. Examiner disagrees; the cited sections describe mirroring of the memories, and in particular an out-of-service processor accessing memory items changed by the in-service processor so as to copy them over the interface bus to the mirror memory.

Conclusion

14. Any inquiry concerning this communication from the examiner should be directed to Gary J. Portka at telephone number (703) 305-4033. The examiner can normally be reached on weekdays from 9:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan, can be reached at (703) 306-2903.

Any response to this final action should be mailed to (or faxed as provided below):

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Fourth Floor (Receptionist).

The fax phone number for the organization where this application or proceeding is assigned are as follows:

(703) 746-7238 (After Final communications)

(703) 746-7239 (Official communications)

Application/Control Number: 09/500,254
Art Unit: 2188

Page 6

(703) 746-7240 (Status inquiries, draft communications)

Any inquiry of a general nature relating to this application or proceeding should be directed to the Group receptionist, whose telephone number is (703) 305-3900.

Gary J. Portka
Primary Examiner
July 30, 2003

A handwritten signature in cursive script, reading "Gary J. Portka".